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1 IN THE UNITED STATES DISTRICT COURT FOR NORTHERN DISTRICT
2 OF MISSISSIPPI, WESTERN DIVISION
3
4

5 FRED BECK, ET AL.,)
6)

7 Plaintiff,)
8)

9 vs.) No. 3:03CV60-P-D
10)

11 KOPPERS, INC., ET AL.,)
12)

13 Defendants.)
14)
15)
16)
17)
18)
19)
20)
21)
22)

23 DEPOSITION OF JAMES DAHLGREN, M.D.
24 SANTA MONICA, CALIFORNIA
25 WEDNESDAY, APRIL 6, 2005
VOLUME II

Reported by:
VIRGINIA PETERAITIS
CSR No. 6205
Job No. 909897

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1 IN THE UNITED STATES DISTRICT COURT FOR NORTHERN DISTRICT
2 OF MISSISSIPPI, WESTERN DIVISION
3
4

5 FRED BECK, ET AL.,)
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9 vs.) No. 3:03CV60-P-D
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11 KOPPERS, INC., ET AL.,)
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13 Defendants.)
14)
15)
16)
17)
18)
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23)
24)
25)

Deposition of JAMES DAHLGREN, M.D.
Volume 2, taken on behalf of Defendants, at
2811 Wilshire Boulevard, Suite 510 Santa Monica,
California, beginning at 8:00 a.m. and ending at
5:00 p.m. on Wednesday, April 6, 2005, before
VIRGINIA PETERAITIS, Certified Shorthand Reporter
No. 6205.

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20 18 Human Exposures Report, 156 pages 266

21 19 Patricia McNeal Report, 13 pages 272

22 20 Questionnaire, Patricia McNeal,
23 47 pages 273

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41 pages 277

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1	INDEX (CONTINUED)	PAGE	1	Have you done that?
2			2	A Yes.
3	23 Derion Griffin Report, 9 pages	278	3	Q What have you found out?
4	24 Questionnaire, Jennifer Griffin,		4	A Well, there is an explanation which -- first of
5	48 pages	285	5	all, let's start with the World Trade Center paper, the
6	25 Makia Carver Report, 12 pages	287	6	normal values. Those were from Dr. Schechter and they
7	26 Questionnaire, Diane Topps,		7	were just published in March in the JOEM on page 208,
8	39 pages	290	8	Table 6.
9	27 Michelle Topps Summary, 22 pages	320	9	Q That's the Journal of Occupational and
10	28 Nykyia George Report, 7 pages	326	10	Environmental Medicine?
11	29 Questionnaire, Nukyia George,		11	A Yes. Table 6 values.
12	35 pages	326	12	Q Can we have a photocopy of this at some point?
13	30 Jarvis McNeal Report, 12 pages	340	13	A Yes.
14	31 Questionnaire, Jarvis McNeal,		14	Q Before you went on the record, you took my copy
15	43 pages	340	15	of something that had been published in the Organohalogen
16	32 Leroy McNeal Report, 7 pages	371	16	Compounds. Is that a different journal?
17	33 Questionnaire, Willie McNeal,		17	A Yes. That's the proceedings from the dioxin
18	37 pages	371	18	2004.
19	34 Report, Sherrie Barnes, 10 pages	394	19	Q So it would have been published in the
20	35 Questionnaire, Kenesha Barnes,		20	proceedings and later published in the JOEM journal. Is
21	36 pages	394	21	there a difference as to what was published in the
22			22	Organohalogen Compounds and the JOEM?
23			23	A Not for the control values.
24			24	Q Do you know the source then of Dr. Schechter's
25			25	control values for --
		199		201
1	Santa Monica, California, Wednesday, April 6, 2005		1	A It's listed here in the article from a variety
2	8:00 a.m. - 5:00 p.m.		2	of different places, blood he obtained from different
3			3	locations.
4	JAMES DAHLGREN, M.D.		4	Q It says on page 201 of the JOEM article that
5	having been first administered an oath, was examined and		5	the whole blood from 29 individuals in Mississippi and 10
6	testified as follows:		6	from New York City was collected.
7	EXAMINATION		7	Did Dr. Schechter use some of the blood you
8	BY MR. HOPP:		8	collected for one of the lawsuits you were working on?
9	Q Good morning. This is day two of Dr.		9	A Yes.
10	Dahlgren's deposition in the Beck case.		10	Q Which lawsuit was that?
11	Do you remember you're still under oath?		11	A I think this one.
12	A Yes.		12	Q So he used the 29 individuals from the
13	Q Yesterday when we left off, we were talking		13	Greenspring area as his control values for the New York
14	about some differences or discrepancies between the		14	City fire fighters?
15	control values that Dr. Schechter had published in 2000		15	A Well, those were values that he used. This
16	and the control values reported in several of your recent		16	paper is mainly about the polybrominated biphenyl ethers.
17	papers, in particular the Persistent Organic Pollutants		17	That was the main purpose of it.
18	in the 9/11 World Trade Center Rescue Workers, The		18	Q You gave me this article, and it's kind of
19	Biomonitoring for Creosote and Pentachlorophenol in		19	lengthy and have not read it yet, but you did say he
20	Nearby Residents of a Wood Treatment Plant and The		20	collected blood from various places and that he used that
21	Exposure Assessment of Residents Living Near a Wood		21	for control values.
22	Treatment Plant.		22	Other than the 29 Grenada residents, where else
23	You were going to look around to see if you can		23	did he get the blood used for control values in the
24	help us to answer some of the questions you raised about		24	article about the New York City fire fighters?
25	those discrepancies.		25	A Archive samples from a 100 Dallas residents
		200		202

1 contributed by Dr. Luby, a hundred bloods from 2003
2 anonymously discarded from UT Southwestern and it was a
3 variety of sources.
4 Q He then just averaged the values he got from
5 the various congeners to come up with his background
6 numbers?
7 A Yes.
8 Q I'd like photocopy of this.
9 MR. LUNDY: So the record is clear, you keep
10 referring to Greenspring, and I assume you mean Grenada.
11 Obviously you're depending another suit in Greenspring.
12 MR. HOPP: That was several years ago. I get
13 the G's confused. I mean Grenada. I apologize. This
14 case has nothing to do with Greenspring, and if I ever
15 say that, I mean Grenada.
16 Q In the article in JOEM, what do you conclude
17 about the TEQs for the New York City fire fighters?
18 A Well, I think this doesn't have anything to do
19 with New York City fire fighters. That's not the point
20 of the article.
21 Q Sorry. I'm looking at the wrong thing.
22 A No, the main conclusion of that paper is that
23 PBDE's in the United States are a 100 to 200 times higher
24 than the PBDE's in Europe, and it's a big problem and we
25 have to address it.

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1 Also in the paper it shows an 80 percent
2 reduction in dioxins, that I mentioned to you yesterday,
3 between '73 and 2003. In the 30-year time span there is
4 significant reduction in dioxin levels in the United
5 States.
6 Q So I'm trying to understand. We started off
7 talking about the New York City fire fighter article.
8 A You wanted to know where the normals came from.
9 Q So we were talking about the New York City fire
10 fighters, and you referred me to an article having to do
11 with flame retardants, particularly Table 8 in the
12 article in the JOEM, which contains the same values that
13 Dr. Schecter reported in the New York City fire fighter
14 article.
15 A Yes.
16 Q And it's your testimony that the article on
17 flame retardants answers the question about where Dr.
18 Schecter got his control values that we see in the New
19 York City Fire Fighters article?
20 A That's correct.
21 Q Excuse me if I asked you this before, the New
22 York City Fire Fighters article indicates that the TEQs
23 for the fire fighters was 23.4 and the TEQs for the
24 control value was 34.06.
25 A Yes.

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1 Q Did that mean the TEQ was not elevated for the
2 New York City Fire Fighters?
3 A As a group, it was not elevated. That's
4 correct.
5 Q Let me show you another version of what we
6 marked deposition Exhibit 6. Deposition Exhibit 6 is the
7 or Organohalogen Compounds article entitled Biomonitoring
8 for Creosote and Pentachlorophenol in Nearby Residents of
9 a Wood Treatment Plant; is that correct?
10 A Yes.
11 Q And that article uses the same control values
12 we see in the article Dr. Schecter published in the JOEM
13 in March; right?
14 A Yes.
15 Q And that once again explains the origin of
16 those control values; right?
17 A That's correct.
18 Q Looking again at deposition 6, the total TEQs
19 for the exposed residents in 33; is that right?
20 A Exposed residents? What are you talking about.
21 Q Table 1, on deposition Exhibit 6.
22 A This is the fire fighters.
23 Q I'm sorry. I switched articles on you.
24 Deposition Exhibit 6 is Biomonitoring for Creosote and
25 Pentachlorophenol of Nearby Residents in a Wood Treating

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1 Plant. Do you see that?
2 A Yes.
3 Q Flip to Table 1, please.
4 A Yes.
5 Q Table 1 indicates the total TEQs for the
6 exposed residents is 33?
7 A I see that.
8 Q The TEQs for the Dallas controls or the control
9 values Dr. Schecter has is 34; is that right?
10 A That's correct.
11 Q Does that indicate that at least according to
12 this calculation the TEQs for the exposed residents is
13 not elevated?
14 A That's correct.
15 Q Deposition Exhibit 4 was your article on
16 Exposure Assessment of Residents Living Near a Wood
17 Treating Plant published in 2003.
18 Were you able to determine the origin of the
19 control values you used in that article?
20 A Yes. I've got to call Dr. Schecter at 9:00
21 o'clock our time to confirm this, but he believes that he
22 did publish these values, but he didn't recall off the
23 top of his head where they were different than the values
24 you found for a paper published by Schecter in 2000.
25 That's the presentation he made at the dioxin 2000

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<p>1 meeting. He and Dr. Papke presented their '96 values for 2 the dioxin values.</p> <p>3 This one that he gave me for this paper came 4 from bloods that were collected in 200 and not published 5 in the '96 values. He indicated to me that he does 6 basically a collection each year, and he feels pretty 7 sure he published all of this each year. Where this one 8 was published, however, he was not sure and he will check 9 and I will call him at 9:00 o'clock our time to find out.</p> <p>10 Q Let's take a break at some point and after the 11 break we'll talk if you got an answer about that.</p> <p>12 A There is another thing he said, that the 13 differences are very slight from year to year, and 14 certainly the general values that we see here are quite 15 consistent from year to year, with the overall decline 16 that I mentioned between '73 and 2000.</p> <p>17 Q You stated a couple of times that there is an 18 overall decline in what precisely between '73 and 2000?</p> <p>19 A The dioxins.</p> <p>20 Q In what?</p> <p>21 A In the blood.</p> <p>22 Q Where? In the U.S?</p> <p>23 A That's what I said, in the United States.</p> <p>24 Q I'm making sure you said United States.</p> <p>25 A Table 8 of this article shows the decline in</p> <p style="text-align: right;">207</p>	<p>1 A Yes.</p> <p>2 Q I'd like you to flip to page 58, the second 3 page of the article, second full paragraph under the 4 heading Discussion, it says: "A decrease in TEQ is 5 consistently found in samples in Germany but not 6 consistently found in the U.S."</p> <p>7 Is it your understanding that at least in 1996 8 Dr. Papke and Dr. Schecter were not finding a decline of 9 TEQ values in the United States?</p> <p>10 A Yes, that's what it says.</p> <p>11 Q Do you think that this decline really occurred 12 between 1996 and 2003?</p> <p>13 A I can't answer that question. I think the data 14 we have shows there is a difference between '73 and 2003, 15 seems to be quite significant. What the curve is between 16 those two data points is a little unclear.</p> <p>17 The '96 values present in this paper are 18 somewhat intermediate but it doesn't include the PCBs, 19 this 1996 paper. You look at the total TEQs, PCBs are a 20 big contributor to the total TEQs.</p> <p>21 Q The decrease in total TEQs referenced in the 22 JOEM article from March 2005 is a combination of total 23 TEQs for dioxins and PCBs?</p> <p>24 A Yes.</p> <p>25 Q Have the levels for PCBs, that is the total</p> <p style="text-align: right;">209</p>
<p>1 dioxins, furans, PCBs, mono, ortho PCBs and some TEQs. 2 The TEQs in '73 were 148 and that was the mean value. In 3 2003, they were 26.8, so that's an 82 percent reduction.</p> <p>4 Q So between '73 and 2003?</p> <p>5 A That's correct.</p> <p>6 Q So we're clear for the record, this is figure 5 7 in the JOEM article published in March 2005?</p> <p>8 A Correct.</p> <p>9 (Defendants' Exhibit 8 was marked for 10 Identification by the court reporter.)</p> <p>11 BY MR. HOPP:</p> <p>12 Q I've handed you deposition Exhibit 8. Have you 13 ever seen deposition Exhibit 8 before.</p> <p>14 A No, I have not seen this paper before.</p> <p>15 Q Exhibit 8 is an article written by Dr. Schecter 16 on the subject we were just discussing. The title is "Is 17 There a Decrease in General Population Dioxin Body 18 Burden? A Review of German and American Data."</p> <p>19 A Yes.</p> <p>20 Q Written by Schecter, Olaf Papke and Peter 21 Furst?</p> <p>22 A Yes.</p> <p>23 Q You know both Dr. Schecter and Papke?</p> <p>24 A Yes.</p> <p>25 Q Do you know Peter Furst?</p> <p style="text-align: right;">208</p>	<p>1 TEQs on average in the United States for PCBs dropped 2 more rapidly than total TEQs for dioxins?</p> <p>3 A I don't know the answer to that off the top of 4 my head.</p> <p>5 Q That's something Dr. Schecter will have to 6 answer for us?</p> <p>7 A Yes. He can probably give you answers off the 8 top of his head but I'm not certain of that. He usually 9 when I ask him questions like that has to go and do some 10 research before he can answer.</p> <p>11 Q I want to go back to the fire fighters again 12 for a moment. You indicated that the Hubbard treatment 13 is not a characterization or a term you use; is that 14 correct?</p> <p>15 A Correct.</p> <p>16 Q What term do you use for the treatment of 17 regime that you administered to the WTC fire fighters?</p> <p>18 A I call it the detoxification process and if 19 asked for more detail, I explain what it entails and to 20 me it's just detoxification. We know it reduces PCB 21 levels significantly.</p> <p>22 Q Do we know whether it reduces dioxin levels?</p> <p>23 A Yes.</p> <p>24 Q Have you considered administering it to any of 25 the residents of Grenada?</p> <p style="text-align: right;">210</p>

1 A I think it would be a good idea to do that.
2 Q Have you suggested it to anyone in Grenada?
3 A I mentioned it to Mr. Lundy but, I think it's a
4 good idea for anybody that has an elevated value of PCBs
5 or dioxins to consider doing something to reduce the
6 level because we know that judging by the fire fighters
7 in New York and also the Yugoslavian patients treated and
8 the PVB patients treated with the treatment that it helps
9 them feel better and theoretically reduces the risk of
10 future disease and definitely would a good idea to
11 administer this treatment to individuals in Grenada.
12 Q Now, you said a moment ago that it
13 theoretically reduces the risk of future disease.
14 Is there any evidence that you're aware of that
15 it does reduce the risk of future disease? Has that been
16 studied?
17 A Not really. We do have -- we can infer from
18 the data that shows the dose makes the poison, that the
19 more of the poison you have in your body the more likely
20 you are to have an adverse effect, and that's a general
21 principle we can accept.
22 And by lowering the internal dose, it reduces
23 the adverse effects that occur, including things like
24 cancer which would be one of the risks that we discussed
25 would be increased by the presence of dioxins in the

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1 detoxification program?
2 A No.
3 Q All your work is voluntary work?
4 A Correct.
5 Q Let me show you what we'll mark Exhibit 10.
6 (Defendants' Exhibit 10 was marked for
7 identification by the court reporter.)
8 BY MR. HOPP:
9 Q Deposition Exhibit 10 is a reprint of a
10 newspaper article, a news wire article that mentions your
11 name.
12 This is April 2004, and deals with the
13 detoxification program for the fire fighters, and I know
14 you didn't write the article, but reviewing it briefly is
15 this the same program we've been talking about, the
16 detoxification program you administered to the New York
17 City fire fighters?
18 A Yes.
19 Q Was Mr. Tom Cruise involved in raising funds
20 for that effort?
21 A That's correct.
22 Q And you're quoted in the article, do you see
23 that on page 2?
24 A Yes.
25 Q And the quote is, "It's already established

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1 body.
2 Q To put it in layman's terms, higher dose equals
3 higher risk; right?
4 A Yes.
5 Q If you lower the dose, you lower the risk?
6 A Yes.
7 Q Let me show you what we'll mark as deposition
8 Exhibit 9.
9 (Defendants' Exhibit 9 was marked for
10 identification by the court reporter.)
11 BY MR. HOPP:
12 Q Deposition Exhibit 9 is a letter on your
13 stationery. Did you write this letter?
14 A Yes.
15 Q Who is Apryl McNeil?
16 A She is the doctor who is in charge of the
17 downtown Medical Center in New York City.
18 Q Do you work with Dr. McNeil?
19 A Yes.
20 Q Do you work with her on an ongoing basis?
21 A Yes.
22 Q Are you still involved in this detoxification
23 program?
24 A Yes.
25 Q Are you being paid for your work on the

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1 that this exposure was so unprecedented and complex that
2 we will never understand it completely."
3 Is that an accurate quote, did you say that?
4 A Yes.
5 Q And then you go on -- there is another quote
6 from you -- "What we really need to focus on is helping
7 victims recover. This is the only program that addresses
8 the causes of toxic illness."
9 Do you see that?
10 A Yes.
11 Q Is that an accurate quote?
12 A Yes.
13 Q I want to talk to you about another
14 detoxification regimen.
15 (Defendants' Exhibit 11 was marked for
16 identification by the court reporter.)
17 BY MR. HOPP:
18 Q Deposition Exhibit 11 is a reprint of an
19 article from a publication called the Humanist and deal
20 with a regimen referred to Narconon.
21 Do you see that?
22 A Yes.
23 Q Are you familiar with Narconon?
24 A Well, I know what it is and I don't know too
25 much else about it. It's a drug treatment program that I

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5 (Pages 211 to 214)

<p>1 think was started by L. Ron Hubbard, the same person that 2 started Scientology.</p> <p>3 Q What is your understanding of what is involved 4 in the Narconon treatment?</p> <p>5 A Well, I think they do have detoxification using 6 some of the same techniques, and I've not personally got 7 involved with Narconon in any way, but it seems to me 8 that they do a detoxification that's similar.</p> <p>9 In fact, as I understand it, this was how they 10 started the particular detoxification regimen using it as 11 a drug treatment program, and then in the early 80's, as 12 I said yesterday, it was adapted for purposes of treating 13 the patients in northern Michigan exposed to the 14 polybrominated biphenyl ethers -- biphenyls.</p> <p>15 Q The article on page 4 states, in the fourth 16 full paragraph down, "In response to allegations of 17 pseudoscience, Narconon provides supporting commentary 18 from James Dahlgren, M.D. of the UCLA School of 19 Medicine," and it mentioned other folks.</p> <p>20 Did you provide data or a letter in support of 21 Narconon?</p> <p>22 A No.</p> <p>23 Q What supporting commentary did you give, if 24 any?</p> <p>25 A They called me once and asked me about the</p> <p style="text-align: right;">215</p>	<p>1 called the Foundation for Advancement of Science and 2 Education, FASE, and he's very active with Narconon.</p> <p>3 Q Do you do ongoing work with Keith Miller?</p> <p>4 A Other than the role I play of being the 5 toxicologist for the New York City detoxification project 6 where Keith Miller is involved, that's the only 7 relationship I have with him.</p> <p>8 Q While we're at it, I want to discuss another 9 quote that has been attributed to you, another subject 10 where you're mentioned in a newspaper article, and we'll 11 mark that as 12.</p> <p>12 (Defendants' Exhibit 12 was marked for 13 identification by the court reporter.)</p> <p>14 BY MR. HOPP:</p> <p>15 Q Deposition Exhibit 12 is a reprint from an 16 article in a publication called Vegetarian Times and 17 you're quoted on page 2 of the reprint discussing 18 something called the hygiene hypothesis.</p> <p>19 Do you see that?</p> <p>20 A I see that.</p> <p>21 Q What's that hygiene hypothesis?</p> <p>22 A That is by keeping people too clean their 23 immune systems don't get stimulated and are prone to 24 certain problems.</p> <p>25 Q Do you ascribe to the hygiene hypothesis or do</p> <p style="text-align: right;">217</p>
<p>1 issue that -- apparently there was some question about 2 whether or not there were drugs stored in the body, and I 3 told them there is substantial solid scientific evidence 4 that marijuana in particular is stored in the body for 5 literally years and similar to PCBs.</p> <p>6 And some of the other drugs have a long 7 half-life, like LSD and PCP and encycloclodene, sometimes 8 called angel dust, and even cocaine and other chemicals 9 have a slow washout period. There's the initial quick 10 dropoff, but then a slow washout. So the use of drugs -- 11 heavy use is frequently associated with a persistence in 12 the body for months to years of these chemicals, and that 13 part of the reason why Narconon is more successful than 14 other drug treatment programs is that they by washing 15 these chemicals out of the body and reducing the levels 16 significantly, they helped reduce the craving that people 17 have for them and help them stay off of drugs.</p> <p>18 The piece that they asked me about is, is there 19 scientific evidence that these chemicals do persist in 20 the body, and I said that there is a large body of 21 evidence on that point, and that's probably the source of 22 this quote.</p> <p>23 Q So it was a telephone conversation you had with 24 someone?</p> <p>25 A Keith Miller, the head of organization that is</p> <p style="text-align: right;">216</p>	<p>1 you challenge it?</p> <p>2 A No, I think there is some validity to it. You 3 know, the body does need to have exposure to germs to 4 develop the immunity to them and, if we don't do that, 5 then there appears to be certain alterations in the 6 immune system and occurrence of allergies and autoimmune 7 disease is increased.</p> <p>8 Q There is a sort of a general theory out there 9 that keeping children in particular or keeping our homes 10 too clean contributes to the incidence of childhood 11 asthma.</p> <p>12 Are you familiar with that?</p> <p>13 A I'm understanding that's part of it and it's 14 also been thought to be a basis for the patients 15 developing Hodgkin's lymphoma and a variety of health 16 problems.</p> <p>17 Q Do you agree with that theory in general?</p> <p>18 A I think there is evidence for it and there's 19 good reason to not be too ultra-clean with developing 20 children. I don't see any evidence against that 21 hypothesis, but there is gathering evidence and not a lot 22 of that data but some.</p> <p>23 Q So the idea is that to build up our immunity or 24 resistance to certain disease processes, we need to be 25 exposed to these low levels of things that cause it?</p> <p style="text-align: right;">218</p>

1 A You need to have a certain number of infections
2 as a child, both viral and bacterial, for your immune
3 system to be in balance. We're programmed for that sort
4 of thing, and, when it doesn't happen, the immune system
5 gets out of whack.

6 Q Is there also some evidence that pet dander is
7 a leading cause of childhood asthma?

8 A I don't know if leading cause but it's been
9 identify as a definite cause. It's probably -- it may be
10 among the more common, but there's a bunch of other
11 antigens in the environment that can trigger asthma in
12 children and pet dander is only one.

13 Q What other antigens in the environment have
14 been identified as causes of childhood asthma?

15 A House dust, mite fragments and other insect
16 fragments. Just about any -- things like feathers and
17 synthetic fibers and -- there's hundreds of different
18 items that have been identified.

19 If you have a child with asthma, you want to
20 asthma-proof your house and do away with carpeting and do
21 away with upholstered furniture and heavy drapes,
22 anything where the dust and insect parts and pet dander
23 and any other complex proteinaceous antigens can hide,
24 and you get rid of your pets and avoid all kinds of
25 environmental chemicals that trigger asthma in a child,

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1 especially if the child has a severe asthma condition,
2 you want to asthma-proof your home.

3 Most people don't have allergies to everything.
4 They seem to react more strongly to certain items and so
5 you can try to focus your attention on those items that
6 are the most important. There is also the major role of
7 environmental pollutants, that we discussed yesterday,
8 and the oxidant load clearly has an impact.

9 It turns out that asthma is not simply an
10 allergic disease but a disease of the immune system and
11 basically what happens is that the person with asthma,
12 child or adult, their inflammatory response is
13 exaggerated, and this could be associated with allergies
14 but also associated with other things.

15 As I mentioned yesterday, oxidant load, but one
16 of the most well described chemical asthmas that we know
17 about is toluene diisocyanate asthma, and the study of
18 that is that asthma is a very complex disease and TDI
19 alters several different aspects of the inflammatory
20 response and not just one. And it's clearly not simply
21 an allergy. It's not that we develop IGE antibodies or
22 IGA antibodies to TDI, and that forms the mechanism of
23 the disease.

24 Some patients with TDI asthma don't have
25 antibodies to it at all and still are reacting so it's --

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1 we don't understand all the mechanisms yet, why people
2 get asthma, but it's clear that it's an inflammatory
3 disease and not just simply an allergy, like I think we
4 used to think, and we had an oversimplified view of a
5 very complex process.

6 Q Is there an allergic component to asthma? Can
7 asthma be triggered by an allergen?

8 A Yes, it can be. My point is that is not even
9 turning out to be the main cause.

10 Q After an asthmatic attack is over with, is it
11 possible to draw a blood sample and see whether the level
12 of antigens or allergens in a patient's blood are
13 elevated?

14 A You can do that, yes. But let me give you an
15 anecdote. I had childhood asthma when I was 3 years old,
16 and we lived in South Central L.A., and I used to get
17 attacks in the evening when the fog would roll in. The
18 doctor that was taking care of me said that you have to
19 move to my parents and get away from that fog that rolls
20 in in the afternoon.

21 Well, I found out years later -- and my parents
22 moved and I never had another attack of asthma. We moved
23 to Bakersfield. But I found out years later that in that
24 fog was SO₂ coming from the power plant a few miles away
25 from our home, and the SO₂ levels in that time frame,

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1 1945, were so high that it was causing metal in Garrett
2 Engineering on Sepulveda and Century Boulevard to go out
3 of tolerance in one night.

4 In other words, they would grind a metal part
5 to a one-thousandth's inch intolerance and leave it on
6 the bench and the next morning they would come in and the
7 part would be out of tolerance, out of balance, and
8 enough of the SO₂ had landed on the part to corrode the
9 metal part.

10 So Garrett Engineering got a scientist to find
11 out where the SO₂ was coming from and tracked it down and
12 forced the power plant to put an SO₂ scrubber on their
13 unit, and that whole process took several years, and to
14 this day there is one SO₂ monitor in Southern California
15 and it's next to Garrett Engineering.

16 Q SO₂ is sulphur?

17 A Sulphur dioxide, a combustion product, when you
18 burn any hydrocarbon fuel that contains sulphur.

19 Q Like the coal at the power plant?

20 A Coal or oil, if you will, and it's a common
21 contaminant from many sources.

22 Q To return to your story, after you moved to
23 Bakersfield --

24 A I never had an attack in my life.

25 Q Is Bakersfield out in a drier climate than the

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<p>1 L.A. basin?</p> <p>2 A Drier and less polluted.</p> <p>3 Q Bakersfield is on the edge of the desert?</p> <p>4 A It's in the San Joaquin Valley and considered a</p> <p>5 semi-dry area. Rainfall is about 12 to 15 inches a year,</p> <p>6 like L.A., whereas the desert is under 5 inches.</p> <p>7 (Defendants' Exhibit 13 was marked for</p> <p>8 identification by the court reporter.)</p> <p>9 BY MR. HOPP:</p> <p>10 Q I've handed you what we've marked Exhibit 13.</p> <p>11 Do you recognize this document?</p> <p>12 A Well, I believe it was -- it may be the</p> <p>13 Greenville data -- and let me look and see. This looks</p> <p>14 like the Greenville data. This is the report we got from</p> <p>15 AXYS on the four pooled samples that I believe we talked</p> <p>16 about.</p> <p>17 Q And we talked yesterday about the notion that</p> <p>18 these four pooled samples from Greenville, Mississippi</p> <p>19 are the basis of your control population for dioxins in</p> <p>20 Grenada?</p> <p>21 A That's correct.</p> <p>22 Q And the report we have in front of us is from</p> <p>23 AXYS Laboratories in Sydney, British Columbia.</p> <p>24 Is the report you received in February 2005 on</p> <p>25 those pooled samples? Is that right?</p> <p style="text-align: right;">223</p>	<p>1 A Yes.</p> <p>2 (Defendants' Exhibit 14 was marked for</p> <p>3 identification by the court reporter.)</p> <p>4 BY MR. HOPP:</p> <p>5 Q I'm handing you back what we marked deposition</p> <p>6 Exhibit 14. Continue with your answer.</p> <p>7 A Because this wasn't their normal standard</p> <p>8 practice, they didn't send us the normal standard report,</p> <p>9 which is for an individual patient. Their system is such</p> <p>10 that this pooled sample, the Axys I.D. number -- what I'd</p> <p>11 like them to do is stick that in as a name and give it as</p> <p>12 a pooled sample, and we're trying to get them to do that</p> <p>13 and this is the data they sent us.</p> <p>14 Q So you're still waiting for more information</p> <p>15 from AXYS?</p> <p>16 A No. I'm just asking for it to be in a report</p> <p>17 format so each one of the pooled samples will have its</p> <p>18 own value.</p> <p>19 Q I want to make sure I understand. You're</p> <p>20 waiting for a report in a different format from AXYS?</p> <p>21 A Well, this is perfectly adequate for our</p> <p>22 purposes scientifically, and gives us the result of each</p> <p>23 pooled sample, and the methodology is laid out here and,</p> <p>24 you know, this is perfectly adequate.</p> <p>25 Then we have the mean values of these two means</p> <p style="text-align: right;">225</p>
<p>1 A That is correct.</p> <p>2 Q I'll tell you that I've been through this</p> <p>3 several times, and I can't find the measurements for the</p> <p>4 various congeners of dioxins identified in those pooled</p> <p>5 samples. Can you find it?</p> <p>6 A Well, they gave us the spreadsheet of which</p> <p>7 this is a copy.</p> <p>8 Q It's a separate document?</p> <p>9 A This is what they sent us originally, and then</p> <p>10 we said that we need the QC/QA and the methods in paper</p> <p>11 and all of the various documents that are supportive. So</p> <p>12 this is just the data that underlies it. The actual</p> <p>13 report was given to us on a spreadsheet. This is a copy</p> <p>14 of that spreadsheet.</p> <p>15 Q So we're clear, the AXYS report, Exhibit 13,</p> <p>16 this is essentially the lab report?</p> <p>17 A Right. You can see the sample prep records and</p> <p>18 they took all the samples and combined ten of them into</p> <p>19 one, and so they didn't give us any individual reports</p> <p>20 and gave us to us in a spreadsheet.</p> <p>21 Yesterday when I realized that, I asked them to</p> <p>22 send us one of their typical reports, and, since they're</p> <p>23 pooled samples, their normal methodology is to report</p> <p>24 individual patients, if you know what I mean.</p> <p>25 Q So we're clear, can we mark this?</p> <p style="text-align: right;">224</p>	<p>1 together, and these two means together, and then all four</p> <p>2 of them over here together. And, as you can see, they're</p> <p>3 very similar to order of magnitude across the board and</p> <p>4 very similar to what we see, for example, in this 2005</p> <p>5 article that we just were referring to, the values here</p> <p>6 on Table 6.</p> <p>7 MR. LUNDY: It's 9:00 o'clock.</p> <p>8 (Recess.)</p> <p>9 BY MR. HOPP:</p> <p>10 Q Dr. Dahlgren, during the break you were going</p> <p>11 to try to reach Dr. Schecter and ask him questions. Were</p> <p>12 you able to get a hold of him?</p> <p>13 A Yes.</p> <p>14 Q What did he tell you?</p> <p>15 A That the data we reported in the Environmental</p> <p>16 Research paper in 2003 was from a group of patients that</p> <p>17 he examined or had a pooled sample from the year 2000,</p> <p>18 and that that was the first time it was reported and it</p> <p>19 was new data and that's why there was no reference for</p> <p>20 it.</p> <p>21 Now, the other thing he pointed out was that</p> <p>22 it's very similar to what we just published in the JOEM,</p> <p>23 that the values are very, very similar, so there is no</p> <p>24 substantial issue here. The values, as I pointed out, I</p> <p>25 think, before the break, we're looking at numbers that</p> <p style="text-align: right;">226</p>

1 are similar and orders of magnitude that are very close,
2 but the specific values presented in that paper came from
3 a pooled sample that he did that year.
4 Q You're the lead auditor on the 2003 paper?
5 A Yes.
6 Q Do you remember actually looking at some sort
7 of spreadsheet or analysis or something that would
8 indicate those values that were reported in your paper?
9 A As I recall, and it's a few years since I wrote
10 the paper, but I think, as I recall, he sent us an e-mail
11 with these values and put them in the paper.
12 Q Do you still have that?
13 A I don't know.
14 Q Would you check for me. I will request that
15 and I'd like to see the hard copy of that data.
16 A I think what he told me he'd do is find in his
17 files, you know, the basis for that, and what reports he
18 had in his files and the basis for that, and said that
19 he's not sure that he can find it and has a very busy day
20 of teaching most of the day and will make an attempt to
21 try to find it.
22 Q If he can resend it to you, that's great, but
23 what I really want is the data in your possession in 2003
24 or before 2003 when you wrote the paper, and I'd like you
25 to check your files?

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1 A I will do that.
2 Q Now, let's looking again at Exhibit 14. Before
3 the beak we were talking about deposition Exhibit 14, and
4 this is the spreadsheet of the data that acts as
5 laboratories for data derived from the pooled samples;
6 correct?
7 A I want to correct the impression that I gave
8 earlier that there is something unusual about the pooled
9 samples. They're very commonly done in -- we're talking
10 about the pooled samples that Dr. Schecter has used for
11 his Dallas controls in Environmental Research, but also
12 in the JOEM paper that we're looking at, the pooled
13 samples are used there.
14 It's a standard procedure to use pooled
15 samples, especially when each analysis costs \$2,000 and
16 you want to know whether a population of people have an
17 elevated value, you do the pooled sample procedure, and
18 the AXYS lab does it routinely, and it's routinely done
19 in all the scientific literature. So I don't want to
20 give you the impression that there is anything unusual or
21 abnormal or in any way lacking in scientific basis to do
22 a pooled sample.
23 Q If the pooled sample becomes contaminated, then
24 you have a problem; right?
25 A Well, pooled or individual samples if

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1 contaminated is a problem and -- sure.
2 Q You pretty much have to throw the sample out
3 and not use it, depending on the contaminant?
4 A Yes. I'd agree that if you have a contaminated
5 sample, you have to get another sample.
6 Q Let's look at the values then for deposition
7 Exhibit 14. Starting with TCDD, we have values across
8 the -- let me back up.
9 I want to focus on 2,3,7,8 TCDD. Do you see
10 the values reported on Exhibit 14?
11 A Yes.
12 Q You have numbers attached to these values but
13 there is a K before each one of the numbers in the four
14 pooled samples. Do you see that?
15 A Yes.
16 Q What's K mean?
17 A There a footnote, if you will notice, on the
18 second page and it's K/R/NDR = peak detected but did not
19 meet quantification criteria, result reported represents
20 the estimated maximum possible concentration.
21 Q In layman's terms, what does that mean?
22 A The laboratory has a rule that you have to have
23 a signal to noise ratio greater than 5 -- most labs use
24 5.
25 If the peak is under that amount, you can say

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1 that the peak is probably a present but you can't
2 reliably quantify that peak. For whatever reason on that
3 run or these series of runs that they did, they didn't
4 meet the quality control criteria for quantification.
5 So there was some TCDD there, and they just
6 couldn't reliably quantify it, but what they then did is
7 gave estimates of the amounts and these would be the
8 maximum. That doesn't mean that's the accurate result,
9 but it does indicate that it was probably there -- this
10 number should not be relied upon because of the QC
11 requirements but, you know, it had to be -- it had to be
12 reported this way because of the lab requirements.
13 Q Can you tell me either from memory or from
14 relying on the AXYS report what the quantification limit
15 was for the TCDD results?
16 A No, I can't tell you what the signals to noise
17 ratio problem was. We'd have to go back to the
18 laboratory and get more information, whether they even
19 can remember it or not.
20 Q Well, the quantification limits are something
21 that should be reported in the lab report, I think;
22 right?
23 A If you look at the acceptance criteria in their
24 QC discussion --
25 Q Which page are you on?

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<p>1 A They have a whole analysis of TCDD and PCDF --</p> <p>2 Q Page 1 of 6.</p> <p>3 A It's the description of the analytical method.</p> <p>4 They describe how they do it, what the steps are, and</p> <p>5 these are all general criteria. I don't know where, if</p> <p>6 at all, they report the detection limits they had on that</p> <p>7 particular congener on that particular day.</p> <p>8 Q Let's look at page 5 of 5, and this is near</p> <p>9 where you were looking because there are so many</p> <p>10 different sets of pages. It's after the long chart on</p> <p>11 acceptance criteria and it's Table 2. It says "Detection</p> <p>12 Limit," and the first statement is "SDL Requirements."</p> <p>13 Do you know what that means?</p> <p>14 A Not for sure, no.</p> <p>15 Q And then after it says, "Blood: Tetra-penta</p> <p>16 CDD/F 0.2 picograms per sample."</p> <p>17 A That's what it says.</p> <p>18 Q Does that help you with the detection limit?</p> <p>19 A Yes. But on a given run they might be</p> <p>20 different, and that's what is suggested here by the K.</p> <p>21 For whatever reason that particular analyte on that</p> <p>22 particular day, they were having problems, because two</p> <p>23 tenths of the picogram, they should be able to detect the</p> <p>24 TCDD.</p> <p>25 As you pointed out yesterday, usually there is</p> <p style="text-align: right;">231</p>	<p>1 (Defendants' Exhibit 15 was marked for</p> <p>2 identification by the court reporter.)</p> <p>3 BY MR. HOPP:</p> <p>4 Q I'm handing you a copy of deposition 15, a JOEM</p> <p>5 article from March 2005 that you photocopied during the</p> <p>6 break.</p> <p>7 Looking at Table 6 -- take a look at Table 6</p> <p>8 for me -- Dr. Schecter reports a pooled blood sample and</p> <p>9 he does get a result for TCDD. Do you see that?</p> <p>10 A Yes, I understand.</p> <p>11 Q And so Dr. Schecter's sample was broader, as we</p> <p>12 discussed, and included people from Grenada and others</p> <p>13 but he was able to come up with 3.8 as the TEQ for TCDD;</p> <p>14 is that right?</p> <p>15 A Yes, a concentration of the TEQ, yes. Well,</p> <p>16 TCDD -- the TEF is 1 so the concentration and the TEQ is</p> <p>17 the same.</p> <p>18 Q We'll talk about the TEQ as we go on.</p> <p>19 I apologize if I asked you this yesterday.</p> <p>20 You've done a lot of this work where you had samples</p> <p>21 analyzed for dioxins and furans and other things.</p> <p>22 Have you ever seen a report like this that</p> <p>23 comes back with a TEQ for TCDD as a zero?</p> <p>24 A I think I've probably seen it done before but</p> <p>25 it's not common. Usually there is a result for TCDD.</p> <p style="text-align: right;">233</p>
<p>1 some and it may be low, but it will be above point 2, but</p> <p>2 for whatever reason they detected it and couldn't</p> <p>3 quantify it. That's the important point.</p> <p>4 Q To complete the thought, the K values we see on</p> <p>5 deposition Exhibit 14 for TCDD all exceed 2 picograms per</p> <p>6 gram; is that correct?</p> <p>7 A That's correct. Detection limit is two tenths</p> <p>8 of a picogram, however.</p> <p>9 Q So the detection limit is two tenths of a</p> <p>10 picogram and it exceeds 2 picograms, and that's at least</p> <p>11 one order of magnitude?</p> <p>12 A That's correct.</p> <p>13 Q What's the scientific reason for reporting zero</p> <p>14 as the mean value for TCDD, as opposed to reporting it as</p> <p>15 a K value?</p> <p>16 A You can't reliably quantify the value -- you</p> <p>17 can do half the detection limit, which would be a tenth</p> <p>18 of a picogram, or you call it zero. Those are the two</p> <p>19 choices given for TEQ analysis.</p> <p>20 In this case it was felt that -- recommended by</p> <p>21 the laboratory that we call it zero because of the</p> <p>22 inability to quantify.</p> <p>23 Q Just for comparison sake, going back to Dr.</p> <p>24 Schecter's article in JOEM -- which should be marked as</p> <p>25 an exhibit.</p> <p style="text-align: right;">232</p>	<p>1 Q Can you tell me specifically when before you've</p> <p>2 seen this?</p> <p>3 A No, I can't. I've been looking at these things</p> <p>4 for 25 years and can't remember every detail. It's not</p> <p>5 uncommon to have these K's pop up. There is another K</p> <p>6 down in one of the furans.</p> <p>7 Q And this is now 1,2,3,4,6,7,8 HxCDF; is that</p> <p>8 right?</p> <p>9 A Yes. And the OCDF, there is also a K value on</p> <p>10 the composite B and composite D samples, as well. And</p> <p>11 then there is also a K on the 2,3,4,6,7,8 Hexa CDF under</p> <p>12 the D sample.</p> <p>13 Q Now, under the octa, there is two K values;</p> <p>14 right?</p> <p>15 A Comp B and D, both K values, yes.</p> <p>16 Q For calculating the mean, you throw out the K</p> <p>17 values; is that right?</p> <p>18 A As you can see, the values for that were --</p> <p>19 what they have done is they have taken it looks like --</p> <p>20 it looks like they took -- they gave some kind of value</p> <p>21 and if you take zero and 275 -- that's what they did.</p> <p>22 They calculated the K as zero. The mean value then was</p> <p>23 basically half of the detected value in Comp A, so they</p> <p>24 were being consistent.</p> <p>25 Q I know we've covered this, but there were 40</p> <p style="text-align: right;">234</p>

1 people in the group from Greenville that made up the
2 comparison sample; is that correct?
3 A Yes.
4 Q And the blood was divided into four pooled
5 samples; is that right?
6 A That's correct.
7 Q Do you know the method by which people were
8 chosen for each pool sample, that is, how did we decide
9 that one person goes into pooled sample A, as opposed to
10 pooled sample B?
11 A It's just a matter of the first ten, second
12 ten, third ten and the fourth ten. The first group of 20
13 lived close to the Platte Chemical Plant, and the other
14 group of 20 lived far away.
15 And we were trying to see if there might be an
16 exposure factor for dioxins and there appeared to be no
17 difference between the two groups, and there is no
18 evidence in the environment there of any dioxins, so it
19 would appear that all of these people were basically
20 unexposed.
21 By the way, subsequently I received normal
22 values obtained by Dr. Rod O'Connor on another town in
23 Columbia, Mississippi where he was looking for controls,
24 and the values that he found, which I've got a copy of
25 here for you, were very similar to the Greenville values,

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1 Q How do we go from the value on deposition
2 Exhibit 14 to the unexposed mean dioxin level in
3 deposition Exhibit 16?
4 A Well, in Exhibit 16 we're talking about values
5 that have been age, gender, race and smoking status
6 adjusted by the statistician, and you can't extrapolate
7 directly over, and you have to put it into the formula
8 because there is a strong age coefficient for these
9 values.
10 But there is also an influence on gender, males
11 and females are different and race is an issues, as well.
12 So all of these values were adjusted by the statistician
13 to take that into account.
14 And, as I understand it, she used the mean
15 values from the right-hand side here to enter into the
16 equation but then adjusted them according to the
17 variables that I stated.
18 Q Who is the statistician?
19 A Dr. Kotlerman is her name.
20 Q Does she work with you?
21 A Yes.
22 Q So she's responsible for the unexposed mean
23 dioxin levels in Table 5 of your report?
24 A Yes. I believe the statistical method is
25 discussed in the text that accompanies this table, the

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1 total TEQ was about 17 or 18 and giving, I think,
2 reassurance to me that this Greenville data is indeed
3 accurate for a control value.
4 Q You've got Rod O'Connor's data here for me?
5 A Yes, I do. When we take a break, I'll get it
6 for you.
7 Q I don't know if we marked this. If we did,
8 we'll do it again. Let's mark Table 5 as a separate
9 exhibit -- that's Exhibit 16.
10 (Defendants' Exhibit 16 was marked for
11 identification by the court reporter.)
12 BY MR. HOPP:
13 Q Exhibit 16 is a Table 5 from your January 21,
14 2005 report in this case; is that right?
15 A Correct.
16 Q And the unexposed mean dioxin levels in Table 5
17 are derived from the table we see as deposition Exhibit
18 14?
19 A Yes.
20 Q Now, on Exhibit 14 you have two different means
21 for -- it appears to me, anyway, two different means for
22 the various congeners, and on Table 5, deposition Exhibit
23 16, you report single unexposed mean dioxins.
24 Do you see that?
25 A Yes.

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1 technique that she used. It's a specific statistical
2 method that --
3 Q Does it have a name?
4 A I don't recall the name. I have to look it up
5 in the paper and from memory I don't want to guess what
6 statistical method she used.
7 Q I'm looking at page 69 of your report and I
8 guess the following pages --
9 A There is a section on statistical methods which
10 I think is in that general vicinity.
11 Q If you would do me a favor of pointing it out
12 to me and I can't find it.
13 A Okay. We'll look for it.
14 Q Are we booting up?
15 A Yes. I can't find it now. I know there was a
16 specific technique that Dr. Kotlerman used, but I don't
17 see it listed here, so I have to find out at a break and
18 give it to you.
19 Q The description of the statistical method that
20 Dr. Kotlerman used to derive the unexposed mean dioxin
21 level is not contained within your expert report in this
22 case; is that correct?
23 A I can't find it. I thought I put a sentence or
24 two in there explaining that and I can't find it so it
25 may not be there.

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1 Q We'll take a break and without prejudice to
2 objections later, I'd like that information.
3 A Sure.
4 Q Explain to me, at least in broad overview, how
5 you take a value like say 6.98 for your mean value for a
6 congener of dioxin and adjust that somehow for age, race
7 and other variables? How do you do that?
8 A You put it into an equation and you have a
9 coefficient for each one of the variables.
10 Q So there is an equation published in the
11 literature?
12 A No, it's derived in your data. You look for
13 age variable, you look for sex variable and you look for
14 all these different influences on the data.
15 Q But the method for doing that --
16 A That's a standard statistical method, but I'll
17 get you the name of which particular statistical method
18 she used to do the correction. I think it was probably
19 multiple regression analysis, but I want to double-check.
20 Q It appears that the multiple regression
21 analysis or whatever she used had an effect with respect
22 to some of the mean levels and not others?
23 A Right.
24 Q How do you explain that?
25 A That's what the data showed.

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1 Q Just what the equation spit out?
2 A The statistician looks at the data and says,
3 okay, here is the mean value for the age, X, Y and Z and
4 this is the influence of age, and it has X coefficient
5 and an influence of sex and smoking and ethnicity and
6 race.
7 And sometimes the coefficient is very small and
8 makes very little difference and you put it in anyway,
9 and sometimes it makes a bigger difference. My guess is
10 that in this case this explains the differences
11 between -- most of these adjustments don't amount to
12 anything major, but to be accurate she made those
13 adjustments.
14 Q It may not amount to anything but they did
15 change the numbers; right?
16 A Right. But in terms of TEQ, very little.
17 Let's take one of them where there was a fairly big
18 change and -- it was the 1,2,3,4,7,8 Hexa CDD. The mean
19 value was 3.89 and with aging and other adjustments, the
20 unexposed went to 5.19, so basically from 4 to 5.
21 Q A 20 percent difference?
22 A Yes. But in terms of TEQs, there is a point 01
23 TEQ, so I mean it's a very small difference.
24 Q Just so we're clear for the record, what I'd
25 like is the name of the statistical analysis and all of

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1 Dr. Kotlerman's calculations. I'd like to see how this
2 work was actually done.
3 Do you keep that information?
4 A Well, she could probably recreate it.
5 Ordinarily what she does is goes into the statistical
6 program on the computer and puts in the data and spits
7 out the values and generates the table and may or may not
8 save -- you could conceivably save it, I guess, but you
9 don't usually. What you usually do is if someone
10 questions it, you recalculate it and show you the
11 calculations.
12 Q Well, I'm questioning it, and, to the extent it
13 exists, I'd like the saved calculations, and, if not, I'd
14 like the description of the method that you claim is in
15 your report and anything else related to how this work
16 was done, existing paperwork relating to how it was done,
17 and we may before this is over have to talk to Dr.
18 Kotlerman about that.
19 A As I look at these, I think the only one that
20 seems to be modified is the one that I pointed out to
21 you. The rest of them are the same as listed here on the
22 mean values.
23 Q What do you mean?
24 A In other words, the adjustment only affected
25 that one variable. The rest of them came over as they

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1 were calculated as the mean value.
2 Do you understand what I'm saying? If you look
3 at the OCDD, for example, the 347.5, that's the value
4 that is calculated from just taking the mean value of the
5 four samples.
6 Q Let's clarify then --
7 A There is only one variable that is changed by
8 the statistical method.
9 Q On deposition Exhibit 14, at the right side of
10 the page, there are two columns, and I think I understand
11 what we're dealing with here. Let's go column by column.
12 The first column after the name of the congener
13 on deposition Exhibit 14 is Comp A, and that's the first
14 pooled sample of 10; right?
15 A That's correct.
16 Q Comp B is the second?
17 A Yes.
18 Q And the third column is the average of A and B?
19 A Yes.
20 Q And the fourth column is the third pooled
21 sample of 10?
22 A Yes.
23 Q And the fourth column is the fourth pooled
24 sample of 10?
25 A Yes.

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1 Q The fifth column is the average of columns 4
2 and 5?
3 A Right.
4 Q And the mean is the last column on the page on
5 the right side?
6 A That's right. That takes into account all
7 four.
8 Q So the mean for 2,3,4,7,8 Hexa was changed by
9 your statistical method?
10 A That's correct.
11 Q And all the others --
12 A Were not altered by any of the variables.
13 Q Let's look at --
14 A I was looking at the dioxins and you're looking
15 at the furans now?
16 Q I'm looking at everything. 1,2,3,7, 8 PeCDF --
17 A That's an increase. The next one isn't. The
18 next one is not and the next one isn't and the next one
19 isn't and then the Hexa CDF.
20 Q Let's go back to 1,2,3,7,8 PeCDF. Are you with
21 me?
22 A Yes.
23 Q The number that gets reported as the unexposed
24 mean dioxin level is the same number that appears as the
25 average of pools A and B.

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1 deposition Exhibit 14 than appear on Table 5 in your
2 report? Why do you leave some out?
3 A Maybe because they were zero on both sides. I
4 have to go through and see.
5 Q But if there was a value reported, that's
6 something you'd want to put in your report; is that
7 right?
8 A Yes. We would obviously put it in the report,
9 but, if there was some reason we didn't -- for example,
10 this 1,2,3,4,7,8,9 Hepta CDF -- let's see. It looks like
11 we reported that.
12 Q As a zero?
13 A In the exposed and then point 907 in the
14 unexposed. But that was really Comp D, the only
15 detectable one, and she didn't use the mean with the
16 zeros in that particular one but, again, it's not
17 analyzed, anyway, so it doesn't add to them. It's not
18 meaningful.
19 Q But there was a zero for TCDD and you included
20 that; right?
21 A No. We didn't analyze the TCDD. There is an
22 NA up there, indicating not analyzed.
23 Q The value for TCDD did not form part of your
24 TEQ calculations; is that right?
25 A In the unexposed it was not added. That's

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1 Do you see that? 1.045?
2 A Yes.
3 Q Is there a reason for that that you're aware of
4 or is that just what the statistical method spit out?
5 A I don't know. I have to check and see.
6 Q Is it an unlikely coincidence that the
7 statistical method would generate the same number as
8 pooled samples A and B?
9 A No. It should be point 52 because, as you can
10 see, in Comp C and D, the values were below the detection
11 limit they had for that particular run, and it gave zero.
12 And what is done is they have taken 1.045 and divided it
13 by 2, basically, and that's half. So point 552 is half
14 of it.
15 It may be a mistake. She may have put in the
16 1.045 instead of the 5.225. It's not analyzable, anyway,
17 because the exposed group was zero on this particular
18 analyte, and it doesn't have to carry any significance,
19 but it may be that this 1.045 should be the point 552.
20 Q So that 1.045 in your report, in this case,
21 that may be a mistake?
22 A It may be. But, like I say, it's of no
23 consequence because it was not analyzed. There was a
24 little star beside it that it was not analyzed.
25 Q Why are there more congeners reported in the

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1 correct. To the exposed, it was added.
2 Q And so it made a difference?
3 A Yes.
4 Q Let's go back to deposition Exhibit 13. This
5 is the 2005 AXYS document.
6 A Okay.
7 Q I'm looking at an unnumbered page but it's
8 right before the chain of custody records.
9 A Okay.
10 Q It's entitled Compositing Scheme. Do you see
11 that?
12 A Yes.
13 Q Down at the bottom, after the four charts, it
14 says: "Due to insufficient sample size, the following
15 samples were excluded from composites and were not
16 analyzed." And it lists five different samples.
17 Do you see that?
18 A Yes.
19 Q Out of the pool of 40, five of them were thrown
20 out; is that correct?
21 A Apparently, that's what happened. Well, we
22 will see. It says S005, S0012 -- they're not included in
23 the composite, the numbers and those five samples.
24 Q Composite A is comprised of 11 samples?
25 A There's 11 there.

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<p>1 Q Composite B is also comprised of 11 samples?</p> <p>2 A Yes.</p> <p>3 Q Composite C is comprised of 12 samples?</p> <p>4 A Yes.</p> <p>5 Q And Composite D is comprised of 13 samples?</p> <p>6 A I see 12.</p> <p>7 Q So the actual pooled sample included 46; is</p> <p>8 that right?</p> <p>9 A Let's see 24 and 22 -- 46.</p> <p>10 Q There were 46 individual samples that went into</p> <p>11 the pooled sample; correct?</p> <p>12 A Yes. That is what these numbers suggest.</p> <p>13 Q And five samples were thrown out?</p> <p>14 A Well, were excluded because of the insufficient</p> <p>15 volume, which is strange, but that's what it says.</p> <p>16 Q They were received by the lab and not analyzed?</p> <p>17 A That's correct.</p> <p>18 Q So you had 51 total samples that went to the</p> <p>19 AXYS lab; correct?</p> <p>20 A That's what it suggests and it's not in my</p> <p>21 remembrance but let's see how many chain of custody</p> <p>22 levels they had. It says here -- we go to the sample</p> <p>23 preparation records --</p> <p>24 Q This is towards the end of the document?</p> <p>25 A Kind of in the middle.</p> <p style="text-align: right;">247</p>	<p>1 Q Was that sample then used?</p> <p>2 A I don't know. I have to go back and see. That</p> <p>3 would have been number 20. It looks like they used it in</p> <p>4 Composite C.</p> <p>5 Q The other I.D. number is S0003; correct?</p> <p>6 A Yes. That was the patient label.</p> <p>7 Q And on some of these the -- let's look at</p> <p>8 sample 1, for example. It says "Inverted vial 20 times"</p> <p>9 -- and this is the procedure section -- and then there is</p> <p>10 a symbol before 20 times.</p> <p>11 What's the symbol mean?</p> <p>12 A Approximately.</p> <p>13 Q Subsampled approximately 3 milliliters into a</p> <p>14 new vial?</p> <p>15 A Yes.</p> <p>16 Q And then used it to create a composite; is that</p> <p>17 right?</p> <p>18 A Yes. So now we have a composite sample and</p> <p>19 that's how we got the additional sample preparation</p> <p>20 numbers up to 55.</p> <p>21 Q So some of these samples are combined in the</p> <p>22 composite?</p> <p>23 A Most of them. The composite A, B and C and</p> <p>24 this is -- sample 52 is Comp A, and 53 is Comp B, and 54</p> <p>25 is Comp C and 55 is Comp D, and these are created from</p> <p style="text-align: right;">249</p>
<p>1 Q This is No. 1 through --</p> <p>2 A I have to go through and count and see, but it</p> <p>3 looks like they actually got 55 blood samples. 6 is</p> <p>4 missing. That's what they did, was drop some of them.</p> <p>5 Maybe it is 6. So 6, 26, 27, 37 and 17. So there is not</p> <p>6 a sample preparation record for those five samples and</p> <p>7 they're saying there were only 9 mills, 10 mills, less</p> <p>8 than a mill, 10 mills and around 4 and 1/2 mills for</p> <p>9 those five samples.</p> <p>10 Q But the question was how many samples were</p> <p>11 received by the lab, 51 or 55?</p> <p>12 A I think we -- we have to go through it probably</p> <p>13 in more detail, but it appears that there were some</p> <p>14 samples -- when they first got them, they did not prepare</p> <p>15 them because they didn't think they had a sufficient</p> <p>16 volume and those are the ones they excluded, but it looks</p> <p>17 like with sequential numbering, the lab is up to 55</p> <p>18 samples.</p> <p>19 Q So there is samples --</p> <p>20 A Unaccounted for.</p> <p>21 Q Look at the sample preparation report for</p> <p>22 sample 20. This is L7318-20. A pipette broke off in</p> <p>23 that sample.</p> <p>24 Do you see that?</p> <p>25 A Yes.</p> <p style="text-align: right;">248</p>	<p>1 these various other samples.</p> <p>2 Q Comp C, for example, has how many samples -- it</p> <p>3 has 11 samples in it?</p> <p>4 A 12.</p> <p>5 Q And that's sample 54?</p> <p>6 A Yes.</p> <p>7 Q And the sample preparation records, we have</p> <p>8 AXYS I.D. No. 1, 2, 3, 4, 5, 7, 8 and 9 -- I'm sorry, and</p> <p>9 8, going into sample 54; is that correct?</p> <p>10 A 19, 20, 21 and 22. 1 through 8, 18 through 22.</p> <p>11 Q I do have a question or two -- let's look at</p> <p>12 sample 52. This is one of the composite samples; is that</p> <p>13 right?</p> <p>14 A Yes.</p> <p>15 Q And so the procedure is they inverted the vial</p> <p>16 20 times and then subsampled 3 milliliters of each into a</p> <p>17 new vial and inverted the new vial to mix and divided it</p> <p>18 into two vials?</p> <p>19 A Yes.</p> <p>20 Q And you have 3 milliliters divided into two</p> <p>21 vials; correct?</p> <p>22 A No. 3 milliliters were taken from each</p> <p>23 individual patient samples and put into the composite</p> <p>24 sample and then they took the total volume and divided it</p> <p>25 into two.</p> <p style="text-align: right;">250</p>

1 Q I see. The total volume of the composite
2 samples was divided into two?
3 A Yes.
4 Q And that's what they did for each of the
5 composite samples -- 52, 53, 54, 55 -- 52 through 55.
6 A And then Composite C, it's 18 mills each, which
7 would be about right.
8 (Defendants' Exhibit 17 was marked for
9 identification by the court reporter.)
10 BY MR. HOPP:
11 Q I'll show you what we marked Exhibit 17. Do
12 you recognize that?
13 A It looks like a report from the Columbus,
14 Mississippi group Grenada. This is the Grenada report
15 from ERGO.
16 Q ERGO is Olaf Papke?
17 A Olaf Papke works at ERGO.
18 Q Do you have any ownership interest in ERGO
19 laboratory?
20 A No.
21 Q The description sample in the ERGO report
22 indicates that the names of the people who provided the
23 samples which went into your exposed mean dioxin
24 calculations; is that correct?
25 A Yes.

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1 Q And these are Grenada residents who are somehow
2 selected for inclusion in this testing; is that correct?
3 A That's correct.
4 Q Do you know how they were selected?
5 A They were selected on having still lived in the
6 area and being part of the group, and I think we tried to
7 get most of them living within a mile of the plant, but
8 actually several of them turned out to not be living
9 within a mile of the plant, and these are a cross-section
10 of the plaintiffs that we examined and were picked pretty
11 much at random. The only real requirement which we had
12 was they still had to live in the area and not moved to
13 Memphis or some other place.
14 Q I have more detailed questions about that and
15 we'll get to them later, but I wanted to cover briefly
16 this report.
17 Deposition Exhibit 17 is the entirety of Olaf
18 Papke's report; is that correct? The last page says end
19 of report so I'm guessing this is it.
20 A He, I think, includes the report on the
21 individual patients here. Without going comparing it
22 with the report in my file, it looks like it's complete.
23 Q And Dr. Papke, or his lab at least, did
24 sampling of analysis of blood samples sent to him from
25 this Grenada cohort; is that correct?

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1 A Yes.
2 Q Why did you use Dr. Papke's lab for the Grenada
3 cohort and the AXYS lab for Greenville controls?
4 A Well, that was just a circumstance. In
5 Greenville the other consultants wanted to do the dioxin
6 levels, and had been using AXYS and wanted to use them,
7 and I really didn't have any role in picking the lab at
8 that point.
9 Q Who is the other consultant in Greenville?
10 A Dr. Parant.
11 Q P-a-r-a-n-t?
12 A Yes.
13 Q What's the first name?
14 A I'm not sure.
15 Q Now, as part of the work that ERGO did that Dr.
16 Papke did in Germany, did he analyze a control sample
17 that was provided by Dr. Schecter?
18 A Well, yes -- I don't know if done on this
19 report but ERGO labs has done control work for Dr.
20 Schecter on a routine basis, and he may have had a new
21 sample he ran simultaneously and I'm just looking to see
22 where the sample came in. You say you saw the report --
23 Q Figure 2, on a bar graph, and figure 3 that
24 shows up on a bar graph, and I think the last page of the
25 report mentions the --

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1 A I don't know if it was done simultaneously.
2 Q It's not the last page --
3 A Let's see where was it. Dr. Papke had done the
4 work for -- here it is, page 55 of 60, AJS WB 12/03/03
5 Schecter, and these would have been controlled pooled
6 samples from Dr. Schecter to the laboratory.
7 Q Now, you're listed as the client on the ERGO
8 report?
9 A Yes.
10 Q Did you ask Dr. Papke to do this work?
11 A Yes.
12 Q Did you ask him to analyze Dr. Schecter's
13 control sample?
14 A Well, I don't remember if I specifically asked
15 him to do that or not, but Dr. Papke usually does give or
16 ERGO labs, to say it more accurately, does usually give a
17 reference range and some basis for making a reference.
18 Q I'm curious. How did ERGO know to analyze a
19 sample that was collected or sent to them by Dr. Papke in
20 late -- let me back you.
21 You instructed ERGO to do the work for Grenada;
22 is that correct?
23 A Yes.
24 Q And the report actually -- the ERGO report is
25 dated February 11, 2004?

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1 A Yes.
2 Q So it's over a year ago they reported this; is
3 that right?
4 A That's correct.
5 Q And the samples that you collected or that were
6 collected for the Grenada cohort are identified in this
7 table and shows up on the first page of the report and
8 goes on to the second and third pages. Those samples
9 collected in December of 2003 and November of 2004; is
10 that right?
11 A Date of collection?
12 Q No, receipt of sample 11/12/2003.
13 A Yes, that's what it says.
14 Q And the date of test performance is sometime
15 between December 2003 and November 2004?
16 A Yes.
17 Q Is there a specified hold time for samples like
18 this?
19 A Dioxin and furans and PCBs have no shelf life
20 and can keep it for 20 and 30 years and still analyze
21 them.
22 Q Do they need to be frozen?
23 A They usually are. These particular chemicals
24 through their chemical nature don't break down, and
25 that's one of the problems with them.

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1 Q So you have samples being collected and sent to
2 Dr. Papke in late 2003. You also apparently received a
3 sample from Dr. Schechter in late 2003.
4 And my question to you is do you know why that
5 occurred? Why Schechter sent them a sample and, more
6 specifically, did you ask Schechter to send Dr. Papke a
7 sample?
8 A I don't specifically recall if I asked him or
9 not. What Dr. Schechter did was he said, "Look, I've got
10 a pooled sample. I don't recall asking him to send it
11 but that is I think what happened.
12 Q Were you talking to Dr. Schechter about your
13 work in Grenada around this time period?
14 A I consulted with Dr. Schechter about doing this
15 particular set of tests, yes.
16 Q Do you characterize him as a collaborator for
17 the purpose of the dioxin results you derived in Grenada?
18 A Collaborator, that has a sinister ring to it --
19 Q I didn't say co-conspirator.
20 A I called him and asked him his opinion of what
21 tests to do and where to send it and that kind of thing.
22 I frequently talk to Dr. Schechter about cases that
23 involve dioxin.
24 Q He's a co-author on the paper you did?
25 A Yes, we work together.

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1 Q Did he help you write your expert report in
2 this case?
3 A No.
4 Q With respect to your expert report, did you
5 write all of it?
6 A Well, I wrote all of it, but I had input from
7 my colleagues and Dr. Anderson, the epidemiologist, and
8 Dr. Kotlerman, the statistician, and Mr. Harpreet Takhar,
9 an epidemiologist, one of the authors on the paper, as
10 well, and other people in my office who helped pull
11 together some of the references and tables. I had help,
12 let's put it that way.
13 Q You had help from Anderson, Kotlerman and
14 Takhar?
15 A Yes.
16 Q Anyone else?
17 A No.
18 Q When it came to choose the wording going on the
19 page, who did that?
20 A Me.
21 Q Did you cut and paste from any other documents?
22 A No.
23 Q Some of the paragraphs seem that way, and we'll
24 get to those as we go, but, as we sit here today, you
25 have no recollection of cutting and pasting from

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1 something else?
2 A I have no recollection of cutting and pasting.
3 Q So you dictate and handwrite every word
4 contained in your paper?
5 A That's my recollection. Dr. Anderson may have
6 written some sentences that I incorporated and I don't
7 recall.
8 Q Do you think Dr. Kotlerman had written some
9 sentences you incorporated?
10 A My recollection is she gave me couple of
11 explanations of what statistical method she used. I
12 don't see it in the report and probably didn't make it in
13 the report.
14 Q Did Dr. Takhar give you any --
15 A He's a master's level epidemiologist and not
16 doctor level but Mr. Takhar -- he may have written some
17 sentences that I used in the final product and I don't
18 recall.
19 Q Looking at the control values provided by Dr.
20 Schechter, this is tables -- figures 2 and 3 in the ERGO
21 report, which we have marked deposition Exhibit 17.
22 A What page?
23 Q Figures 2 and 3?
24 A What pages.
25 Q 12 of 60 and 13 of 60.

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1 A All right.
2 Q The control value of Dr. Schecter falls on
3 figure 2 somewhere in the middle of the range
4 statistically, doesn't it?
5 A Yes, a TEQ listing, that's correct.
6 Q And it's hard to read the graph. Do you know
7 what specifically the TEQ is for dioxins that Dr.
8 Schecter provided in his reference of figure 2?
9 A About 34, I think, that's what it is. I think
10 we read that earlier. Yes, the TEQ total is 34.
11 Q Same number shows up in the paper that you and
12 Dr. Schecter authored and was published in Organohalogen
13 Compounds; correct?
14 A Right.
15 Q Looking at the second figure, figure 3, this is
16 page 13 of 60 in the ERGO report?
17 A Yes.
18 Q Drawing your attention to figure 3, deposition
19 Exhibit 17, there is an arrow at one of the lines in the
20 bar graph that says "Control sample provided by A.
21 Schecter."
22 Do you see that?
23 A Yes.
24 Q This table purports to represent OCDD data in
25 U.S. blood samples?

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1 A Yes.
2 Q And what value, if you know, did Dr. Schecter
3 report for his control sample?
4 A Let's go back and find it rather than try to
5 read it from that graph. OCDD was 374.
6 Q And that's the same number we see in table --
7 same number that shows up in your published paper from
8 Organohalogen Compounds, deposition Exhibit 6?
9 A Right.
10 Q Now, it appears, and we'll go through these
11 controls individually and look at the questionnaires
12 later today, but it appears, looking at tables 2 and 3
13 that there were several people who were at the high end
14 for all of these values; is that right?
15 A Yes. There is some that are at the high end.
16 Q Let's look at figure 3, sample H-03-12-0367 is
17 at least twice the level of the next sample in order.
18 Do you see that?
19 A Yes, it's quite high.
20 Q Is there some reason you didn't throw out that
21 sample as a statistical aberration?
22 A No, you don't throw out a sample just because
23 it's high. There is no basis to do that. You throw it
24 out if there is some basis for it. In other words, if
25 there is something wrong with the sample or the

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1 collection or something, but there is no reason to throw
2 out a value because it was high.
3 Q Do you consider that sample to be
4 representative of the population of Greenville?
5 A This is Grenada.
6 Q Sorry. Is this sample representative of the
7 population of Grenada?
8 A No. It's the highest value and not the mean
9 value, so there is -- basically there is several of them
10 that are significantly higher than the control value.
11 Q For the purpose of arriving at your mean
12 values, you essentially averaged the value for all the
13 samples to arrive at the means?
14 A That's correct.
15 Q So these high values, like the 0367 value we
16 see on figure 3, that was included in your average to
17 derive your mean; is that correct?
18 A Yes.
19 Q I'm going to switch subjects and let's take a
20 five-minute break.
21 MR. LUNDY: Sure.
22 (Recess.)
23 BY MR. HOPP:
24 Q Back on the record. Doctor, you brought
25 photocopies in with you. Is there anything new you

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1 identified?
2 A Well, this is material that I have for
3 reference in case it comes up in the discussion, and it's
4 a group of papers on PAH adducts and their predictive
5 value, that when PAH adducts are elevated compared to
6 background levels there is an increased risk of
7 developing cancers and various types.
8 Q Are those papers cited in your report?
9 A I cited, I believe, one paper, the Tang paper
10 what was a study by Phillips and others, of doctors from
11 Harvard Medical School, where they did PAH adducts and
12 followed them for 20 years and found a correlation, the
13 ones with the higher adduct levels had a higher rate of
14 lung cancer.
15 Q So you cited Tang but the other papers in front
16 of you are not cited in your report?
17 A I referred to them yesterday, Dr. Perera from
18 Columbia is the author of several of these papers and
19 alluded to her research in this area. We were talking
20 about birth weight and low birth weight for gestational
21 age and prematurity being related to PAH adduct levels as
22 a different end point with the PAH exposures.
23 Q Now, I know you relied in these papers in
24 response to questions I asked yesterday. Would you say
25 that you relied on these references generally for the

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17 (Pages 259 to 262)

<p>1 purpose of forming your opinions in this case?</p> <p>2 A Yes.</p> <p>3 MR. HOPP: I want copies of these. There is</p> <p>4 one other thing. You produced several disks containing</p> <p>5 papers on which the doctor relied, and we have done a lot</p> <p>6 of work to try to get other papers in the library listed</p> <p>7 in these reference, and there is a list of items he's not</p> <p>8 able to obtain, and I'll send you a letter, hopefully</p> <p>9 tomorrow, and if not on Friday, laying out the few that</p> <p>10 we don't have.</p> <p>11 Q Doctor, before I switch subjects, I want to ask</p> <p>12 you about the U.S. EPA dioxin reassessment, which is</p> <p>13 currently ongoing. Are you familiar with that process?</p> <p>14 A Yes.</p> <p>15 Q What's your understanding of the nature of the</p> <p>16 process and the current status?</p> <p>17 A Well, there is an enormous debate going on, I</p> <p>18 suppose you can call it a debate, within EPA and probably</p> <p>19 within the scientific community about what is a safe</p> <p>20 level of exposure to dioxins and dioxin-like compounds,</p> <p>21 and that would include the PBDEs, by the way, which is a</p> <p>22 newcomer to this debate, and the data we published that</p> <p>23 we have referenced here in whatever number of</p> <p>24 attachments.</p> <p>25 Clearly, there is an issue about whether the</p> <p style="text-align: right;">263</p>	<p>1 that is the debate that is going on.</p> <p>2 Q Where does the EPA stand right now in the</p> <p>3 process?</p> <p>4 A Well, I think the latest pronouncement that the</p> <p>5 EPA made was in November 2003 where there was a consensus</p> <p>6 within the agency that they needed to go public with the</p> <p>7 notion that we need to try to reduce where possible</p> <p>8 dioxin generation.</p> <p>9 The only other thing that I'm aware of from</p> <p>10 the meeting in Berlin in September is there is some</p> <p>11 discussion about revising the TEQs. From what I heard</p> <p>12 about that discussion, it doesn't appear that it's going</p> <p>13 to make a heck of a lot of difference for the underlying</p> <p>14 questions, but there is some attempt maybe to move the</p> <p>15 TEQ values up and down with different congeners based on</p> <p>16 new data.</p> <p>17 Q We've talked over the last day and a half about</p> <p>18 several different papers that you published and studies</p> <p>19 that you've done where you compare an exposed population</p> <p>20 to an unexposed control population for dioxin levels.</p> <p>21 In each instance -- correct me if I'm wrong --</p> <p>22 the control values you use are controls that were either</p> <p>23 identified by Dr. Schecter or in this case the Greenville</p> <p>24 controls you identified yourself; is that right?</p> <p>25 A Correct.</p> <p style="text-align: right;">265</p>
<p>1 current levels of PBDEs, PCBs, dioxins and furans in the</p> <p>2 general population is, in fact, causing a health effect</p> <p>3 and whether or not further steps need to be done to</p> <p>4 reduce exposure of these class of compounds to stimulate</p> <p>5 the AEH receptor, that's sometimes referred to as the</p> <p>6 dioxin receptor.</p> <p>7 I don't think there's any debate that people</p> <p>8 want to reduce dioxins but the real debate is how much</p> <p>9 regulatory pressure is going to be exerted on industry</p> <p>10 and people in the food industry, in particular, but also</p> <p>11 in the power industry and in other areas of the paper</p> <p>12 industry and other areas where dioxin generation is a</p> <p>13 problem with flame retardants and it's several different</p> <p>14 industries where those chemicals are used.</p> <p>15 You can summarize by saying that there is a</p> <p>16 number of industry groups trying to slow down regulatory</p> <p>17 motion towards tightening control on these types of</p> <p>18 chemicals, which would include pentachlorophenol which</p> <p>19 contains in its technical form the form that's usually</p> <p>20 used in industry, not pure and contains as much as one</p> <p>21 percent dioxins and furans and really is a major problem</p> <p>22 and an unwanted contaminant of manufacturing penta.</p> <p>23 When you burn penta or penta-treated wood, you</p> <p>24 create more dioxins, and that's really the banning or the</p> <p>25 restriction of the use of all these types of chemicals</p> <p style="text-align: right;">264</p>	<p>1 Q Is there some particular reason you rely on Dr.</p> <p>2 Schecter or in this case the brand-new controls for the</p> <p>3 purpose of identifying control values, as opposed to</p> <p>4 other literature that's out there and available?</p> <p>5 A I don't know what you're talking about. Dr.</p> <p>6 Schecter is the author of the world's literature of the</p> <p>7 background levels of dioxins and an author of all the</p> <p>8 papers on that subject and the textbook on that. He's</p> <p>9 the world's authority on this.</p> <p>10 Q He's written all the papers on background</p> <p>11 levels?</p> <p>12 A Most were written by him. He didn't write all</p> <p>13 of them.</p> <p>14 Q Let me show you what we're going to mark as</p> <p>15 Exhibit 18?</p> <p>16 MR. LUNDY: I don't see the author who wrote</p> <p>17 this.</p> <p>18 (Defendants' Exhibit 18 was marked for</p> <p>19 identification by the court reporter.)</p> <p>20 BY MR. HOPP:</p> <p>21 Q Deposition Exhibit 18 is a section of the draft</p> <p>22 dioxin reassessment report currently available on the</p> <p>23 U.S. EPA's website.</p> <p>24 Have you read either all or part of the current</p> <p>25 draft of U.S. EPA's reassessment document?</p> <p style="text-align: right;">266</p>

1 A No. I referred to the conclusions of this
2 report, and I said it was November 2003, and it looks
3 like, based on what you gave me, it's December 2003 where
4 they published this draft, and, like I said, I have not
5 read the entire thing. This is section 4, which has to
6 do with background levels.

7 Q And the report, the draft report from U.S. EPA
8 does -- let me start again. Deposition Exhibit 18, as
9 you said, is the section on background concentrations and
10 it's the EPA's attempt in December 2003 to summarize the
11 state of the science on background concentrations on
12 various dioxin congeners; correct?

13 A Yes.

14 Q And it does cite several tables, which I'd like
15 you to look at -- well, let me ask a foundational
16 question.

17 I notice in looking at the literature that some
18 measure dioxin in blood and some in adipose tissue?

19 A Yes.

20 Q What's adipose tissue?

21 A Fat tissue.

22 Q Is there a particular reason why one measures
23 dioxin in adipose tissue, as opposed to blood?

24 A Not in this day and age. It used to be that
25 you couldn't because of the technical limitations of the

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1 laboratory. You needed a whole unit, that means 500 cc's
2 of blood in order to get a blood dioxin measurement. In
3 the early days that's what we used to do with a blood
4 bank, get a whole unit. Nowadays we can do it on a
5 sample of 20 mills of blood, and so it is no longer
6 necessary to do the adipose tissue.

7 Q You did adipose tissue before because you took
8 less?

9 A Well, instead of taking a unit of blood, you do
10 a fat biopsy. You use a needle to do it. However, both
11 needle biopsies and the unit of blood are very, very
12 difficult to deal with.

13 Q If dioxin is in a person's system, is it an
14 equilibrium between the blood and adipose tissue?

15 A Yes, but you have to correct to blood fat,
16 which is the way it's done now and per gram of blood fat,
17 which means it is in the same -- those correlations
18 between adipose tissue biopsies and blood fat analyses
19 correlate at the point 9 level, so it's fine.

20 Q So I understand, the old adipose tissue
21 samples, assuming they're correct for blood fat, should
22 show you the same information that the current blood
23 samples show you?

24 A It should be close, yes.

25 Q And what you're looking for is a person's body

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1 burning for the various congeners of dioxin; right?

2 A Right.

3 Q Looking at tables 17, 18 and 19 -- and this is
4 on pages 4-95, 96 and 97 going on to 98 -- there is an
5 EPA report series of background samples, reports on a
6 series of background samples, including Schecter's.

7 Is there a particular reason you didn't rely on
8 this broader spectrum of background sample data?

9 A The main reason is there is not a lot of
10 difference and it's very similar values.

11 Q What was the NHATS program?

12 A NHES -- National Human Health Evaluation Study
13 carried out by ATSDR and CDC. Every few years they go
14 out and examine the American population for purposes of
15 assessing their health status.

16 Q I understand what NHES is. But have you heard
17 of a program called NHATS?

18 A I don't remember what it is. I've seen it but
19 I don't recall offhand what it is.

20 Q Your answer is that the sample data that you
21 get from the other authors and Dr. Schecter's sample data
22 is pretty much equivalent; is that right?

23 A Well, as I said, the important point is to have
24 a comparison group that is similarly situated and done at
25 a similar time, as much as possible match for all the

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1 variables that are important, except for the exposure.

2 So looking at, for example, the things listed
3 in table 4-18, values for the mean values are very
4 similar to what we've seen. The congener specific
5 concentration at 4-17 is even closer to, you know, what
6 we've seen in our comparison groups, but I don't -- you
7 have to pick a control. As I said, the best control if
8 you have it is simultaneous controls.

9 Q In some of your published papers, you use
10 national control data?

11 A If we don't have something else, we use that.
12 That's correct.

13 Q And the point is there are other studies that
14 contain national control data that were not authored by
15 Dr. Schecter; right?

16 A Yes, there are. Six of the 9 listed in 4-19
17 were Schecter's data.

18 Q And some of those show higher levels on a
19 national or regional basis --

20 A The important part here is to look at the time
21 frames. 4-19 is 1980's to early 90's when we have reason
22 to believe the values are higher than they are now in the
23 background population, as we discussed earlier.

24 Q Schecter has older papers that show higher
25 values --

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<p>1 A That's what I said.</p> <p>2 Q I'm making clear I understood you. We were</p> <p>3 talking over each other. And other people have older</p> <p>4 papers that report higher values?</p> <p>5 A Yes.</p> <p>6 Q Are there current papers within the last two,</p> <p>7 three years not authored by Dr. Schecter that report</p> <p>8 background levels for dioxin?</p> <p>9 A Certainly not listed here in the tables you</p> <p>10 have in front of you. Almost all of them are from the</p> <p>11 90's and 80's, and it's a question of -- I relied on Dr.</p> <p>12 Schecter's expertise as a co-author in the papers to give</p> <p>13 me meaningful data.</p> <p>14 I did not start saying, well, I'll go find some</p> <p>15 other normal values so I have not made a concerted effort</p> <p>16 to look into the questions you raise. But, as I look</p> <p>17 here at these papers, I don't see anything current. They</p> <p>18 don't have -- as Dr. Schecter said to me this morning,</p> <p>19 the best data available is data in this paper, which is</p> <p>20 the latest data.</p> <p>21 Q The 2005 paper?</p> <p>22 A That's what we use for our comparisons at the</p> <p>23 moment.</p> <p>24 Q Has anyone else come out with a paper in 2005</p> <p>25 that had similar background dioxin levels to what Dr.</p> <p style="text-align: right;">271</p>	<p>1 (Defendants' Exhibit 20 was marked for</p> <p>2 identification by the court reporter.)</p> <p>3 BY MR. HOPP:</p> <p>4 Q Do you recognize Exhibit 20?</p> <p>5 A This is the questionnaire that Patricia McNeal</p> <p>6 filled out for us.</p> <p>7 Q It's a complete copy of the questionnaire?</p> <p>8 A It looks like it is.</p> <p>9 Q And it contains neurological testing?</p> <p>10 A Yes.</p> <p>11 Q And that was done by Dr. O'Jile?</p> <p>12 A No. This testing in my file was done by me and</p> <p>13 my staff.</p> <p>14 Q Were the results of that testing transmitted to</p> <p>15 Dr. O'Jile as a basis for her opinions?</p> <p>16 A She went ahead and did her own studies.</p> <p>17 Q So there is separate study results for you and</p> <p>18 your staff and Dr. O'Jile?</p> <p>19 A That's correct.</p> <p>20 Q On your standard questionnaire and, as reported</p> <p>21 on your summaries, you include a question about bleeding</p> <p>22 from the eyes; is that right?</p> <p>23 A Yes, sir.</p> <p>24 Q Is there a particular reason why you include a</p> <p>25 question about bleeding from the eyes on your</p> <p style="text-align: right;">273</p>
<p>1 Schecter has published?</p> <p>2 A I don't know. I can go look it up but, off the</p> <p>3 top of my head, I don't have any.</p> <p>4 Q Let's go back to the plaintiffs we were</p> <p>5 discussing yesterday. Let's just do a little</p> <p>6 housekeeping. We talked about three different plaintiffs</p> <p>7 yesterday, and I want to mark this as Exhibit 19.</p> <p>8 (Defendants' Exhibit 19 was marked for</p> <p>9 identification by the court reporter.)</p> <p>10 BY MR. HOPP:</p> <p>11 Q Deposition Exhibit 19 is your summary of your</p> <p>12 opinions for Patricia McNeal; that is correct?</p> <p>13 A Yes.</p> <p>14 Q And is deposition Exhibit 19 a complete summary</p> <p>15 of your opinions for Patricia McNeal?</p> <p>16 A Yes.</p> <p>17 Q Does Exhibit 19 leave out any major opinions</p> <p>18 with respect to Patricia McNeal?</p> <p>19 A As I pointed out yesterday during the</p> <p>20 cross-examination about this, that the cancer she had in</p> <p>21 1994 was a uterine cervical cancer, squamous cell type</p> <p>22 and not a skin cancer and the report was incorrect on</p> <p>23 that point and needs to be corrected. Otherwise the</p> <p>24 report is complete.</p> <p>25 MR. HOPP: Let's mark this 20.</p> <p style="text-align: right;">272</p>	<p>1 questionnaire?</p> <p>2 A Well, in ordinary life bleeding from the eyes</p> <p>3 doesn't occur. And, therefore, if someone answers the</p> <p>4 question yes, we consider them to have at least</p> <p>5 questionable reliability.</p> <p>6 Q That's a red flag question to see if someone is</p> <p>7 possibly malingering or answering incorrectly?</p> <p>8 A Yes.</p> <p>9 Q Are there other questions in your reports</p> <p>10 similar in nature?</p> <p>11 A No, that's our own validity question.</p> <p>12 Q Are you aware of other people who do what you</p> <p>13 do who use other questions to detect malingering?</p> <p>14 A Yes, there are other tests questions that</p> <p>15 people use. I don't know off the top of my head what</p> <p>16 they are and have seen in reports, particularly</p> <p>17 neuropsychologists have a test that they give people to</p> <p>18 detect malingering. It's not a simple question and a</p> <p>19 protocol they go through.</p> <p>20 This bleeding eyes question I got from a doctor</p> <p>21 who happened to be a defense doctor who used that as his</p> <p>22 validity question and so I started using it some 25 years</p> <p>23 ago.</p> <p>24 Q Have you had anybody tell you that they're</p> <p>25 bleeding from the eyes?</p> <p style="text-align: right;">274</p>